

ATTORNEY DOCKET NO. 02-064CIP (ANSI01-00012)  
U.S. SERIAL NO. 09/500,213  
PATENT

**AMENDMENTS TO THE CLAIMS:**

- 1 1. (Currently Amended) A neurostimulating lead comprising:
- 2 (a) a body member having a length, a wall, a proximal end and a distal end;
- 3 (b) at least one conductor embedded within the wall of the body member and
- 4 extending the length of the body member;
- 5 (c) at least one tunnel extending from an outer surface of the body member to the at
- 6 least one conductor;
- 7 (d) at least one thin film electrode deposited on the outer surface at the distal end of
- 8 the body member; and
- 9 (e) an electroplated conductive link extending through the at least one tunnel from
- 10 the at least one conductor to the at least one thin film electrode.
- 1 2. (Previously Amended) The neurostimulating lead, as in Claim 1, further comprising at
- 2 least one connector having a contact electrically joined to the at least one conductor at the
- 3 proximal end of the body member and adapted to connect the lead to a neurostimulator.

3. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the body member is tubular, having an annular wall defining an internal lumen extending between the proximal end and the distal end with the at least one conductor being spiral wound and embedded in the annular wall.

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4. (Previously Amended) The neurostimulating lead, as in Claim 3, wherein the body member comprises polyurethane and has an outer diameter of about 2 French and an internal diameter of about 0.012 inch.

5. (Previously Amended) The neurostimulating lead, as in Claim 4, wherein the at least one conductor has said conductors have a substantially rectangular cross-section, about 0.004 inch wide by about 0.002 inch high.

6. (Previously Amended) The neurostimulating lead, as in Claim 5, wherein the at least one conductor comprises metal, and wherein the metal is selected from the group consisting of stainless steel, MP35N, titanium, tantalum, tungsten, platinum, and silver.

7. (Previously Amended) The neurostimulating lead, as in Claim 3, wherein the at least one conductor comprises turns, with each turn being at an angle between about 10 degrees to about 80 degrees from a longitudinal axis of the body member.

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1 8. (Previously Amended) The neurostimulating lead, as in Claim 7, wherein the at least  
2 one thin film electrode is electrically connected by the at least one conductive link to the at least  
3 one conductor.

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1 9. (Previously Amended) The neurostimulating lead, as in Claim 7 wherein the at least  
2 one thin film electrode spans and is electrically connected by the at least one conductive link  
3 to more than one turn of the at least one conductor.

10. (Previously Canceled) C

1 11. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the  
2 electroplated conductive link comprises a metal selected from the group consisting of gold,  
3 silver, platinum, platinum-iridium and titanium.

12. (Previously Canceled)

13. (Previously Canceled)

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1 14. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the at least  
2 one thin film electrode includes a first segment and a second segment disposed along a  
3 longitudinal dimension of the body member in overlapped relation, the first segment and the  
4 second segment adapted to be electrically connected to a one of a voltage of positive polarity,  
5 a voltage of negative polarity, and zero voltage.

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1 15. (Previously Amended) The neurostimulating lead, as in Claim 1, wherein the at least  
2 one thin film electrode comprises multiple superposed nanocrystalline metal layers with an  
3 innermost layer of a metal selected from the group consisting of titanium, chromium, nickel and  
4 aluminum and having a thickness less than about 5 microns, a layer adjacent the innermost layer  
5 of a metal selected from the group consisting of lead and platinum and having a thickness  
6 between 500 angstroms and 50 microns, the outermost layer of a metal selected from the group  
7 consisting of gold, platinum and platinum-iridium and having a thickness between 500  
8 angstroms and 50 microns, and a layer adjacent the outermost layer of a metal selected from the  
9 group consisting of gold, platinum, platinum-iridium, silver and copper and having a thickness  
10 between 500 angstroms and 50 microns.

16. - 35. (Canceled/Previously Withdrawn)

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1 36. (Previously Added) A neurostimulating lead comprising:

- 2 (a) a body member having a length, an outer surface, a proximal end and a distal end;
- 3 (b) at least one conductor extending the length of the body member;
- 4 (c) at least one electrode positioned on the outer surface at the distal end of the body
- 5 member; and
- 6 (d) an electroplated conductive link extending from the at least one conductor to the
- 7 at least one electrode.

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1 37. (Previously Added) The neurostimulating lead, as in Claim 36, further comprising a

2 plurality of tunnels extending through a wall of the body member from the at least one

3 conductor to the electrode, each of the plurality of tunnels including an electroplated conductive

4 link for electrically connecting the at least one conductor to the electrode.

1 38. (Previously Added) The neurostimulating lead, as in Claim 37, wherein the at least one

2 conductor comprises turns, with each turn being at an angle between about 10 degrees to about

3 80 degrees from a longitudinal axis of the body member.

1 39. (Previously Added) The neurostimulating lead, as in Claim 36, wherein the at least one

2 conductor is embedded within a wall of the body member.

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1 40. (Previously Amended) A neurostimulating lead comprising:

2 (a) a body member having a length, an outer surface, a proximal end and a distal end;

3 (b) at least one conductor extending the length of the body member;

4 (c) at least one electrode positioned on the outer surface at the distal end of the body  
5 member; and

6 (d) an electroplated conductive link formed during an electroplating process and  
7 extending from the at least one conductor to the at least one electrode, the electroplated  
8 conductive link comprising a metal selected from the group consisting of gold, silver, platinum,  
9 platinum-iridium and titanium.

1 41. (Previously Added) The neurostimulating lead, as in Claim 40, wherein the at least one  
2 conductor is embedded within a wall of the body member and the electroplated conductive link  
3 extends through a tunnel from the at least one conductor to the electrode.

1 42. (Previously Added) The neurostimulating lead, as in Claim 41, wherein a plurality of  
2 electroplated conductive links extend from the at least one conductor to the electrode.